
2010 Concurrency Report

2010 Report On The Level Of Service (LOS) Of The County's Arterial Road Network

This report updates the report dated April 2009.

Prepared by Snohomish County Department of Public Works
Transportation and Environmental Services Division

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Executive Summary

The 2010 concurrency report summarizes the Level-of-Service (LOS) of Snohomish County's arterial road system and the strategies by the Department of Public Works (DPW) to remedy LOS deficiencies. This report covers the period from April 2009 (the date of publication of the previous report) through April 2010.

List of Acronyms Used in This Report

ALOSI	Arterial LOS Improvement
AU	Arterial Unit
AUIA	Arterial Unit in Arrears
DPW	Snohomish County Department of Public Works
IRC	Inadequate Road Condition
LOS	Level of Service
SR	State Route (state highway)
TSA	Transportation Service Area
WSDOT	Washington State Department of Transportation
TIP	Snohomish County's six-year Transportation Improvement Program. (The current 2010 – 2015 TIP was adopted on November 23, 2009.)

Concurrency Management System

Consistent with the requirements of the Growth Management Act (GMA), the concurrency requirements of Snohomish County Code Chapter 30.66B require that for every development application, the County determine whether or not capacity exists (and will likely exist within six years) when the development adds its new trips to the road system. This concurrency determination includes two important considerations:

- 1) An estimate of existing traffic volumes and all new traffic that will be added to the road system from developments that have been deemed concurrent (pipeline trips), and;
- 2) The additional capacity that will be provided on the road system by any system improvements which will be constructed and open to the public within the next six years.

Level of Service (LOS)

Snohomish County uses a four-tiered approach to monitoring the level of service on the road system.

- 1) Screening: Current peak-hour traffic counts are compared with estimated capacities for each arterial unit and average daily traffic (ADT) counts are compared with the thresholds adopted in county code.
- 2) Monitoring: Monitoring consists of more frequent traffic counts and analysis of the traffic conditions.
- 3) Operational Analysis: Operational analysis consists of travel-time studies and/or results from traffic models to determine whether or not LOS on an arterial unit is currently operating below the adopted standard.
- 4) Future Level-of-Service Determinations: Future LOS determinations are used to determine whether or not the LOS within six years is likely to be operating below the adopted standard with the addition of new trips expected to be added to the road system by developments already deemed concurrent.

A review of Snohomish County's concurrency management system is available on the County's web site. The web site includes previous concurrency reports, and many other documents related to the County's traffic mitigation and concurrency regulations. The web site address is:

http://www.snoco.org/Departments/Public_Works/Divisions/TES/ProgramPlanning/3066B/

Arterial Unit Status Definitions

Arterial Units in Arrears (AUIA)

Snohomish County Code defines an Arterial Unit in Arrears (AUIA) as any arterial unit operating, or within six years forecast to operate, below the adopted LOS standard, unless a financial commitment is in place for improvements (or strategies) to remedy the deficiency within six years. The LOS for the urban area is LOS F and in the rural area is LOS D.

Arterial Units at Ultimate Capacity

SCC 30.66B.110(1) states, "When the County Council determines that excessive expenditure of public funds is not warranted for the purpose of maintaining adopted LOS standards on an arterial unit (AU), the County Council may designate, by motion, such arterial unit as being at ultimate capacity. Improvements needed to address operational and safety issues must be identified in conjunction with such ultimate capacity designation."

Arterial Units at Risk of Falling into Arrears

Arterial units that are close to being deficient (i.e., 1-2 mph above LOS F urban or LOS D rural) are considered to be at risk of falling into arrears. For arterial units meeting these criteria, DPW monitors the units with travel time and delay studies conducted on an annual basis.

Summary of Arterial Units in Arrears, at Ultimate Capacity and At Risk

Four (4) Arterial Units are in Arrears

1. Airport Way (99th Avenue SE to SR 9) (AU#353)
2. Marsh Road (Lowell Larimer Road to SR 9) (AU#198)
3. Seattle Hill Road (35th Avenue SE to SR 96) (AU#202)
4. 20th Street SE (SR 9 to the SR 2 Westbound trestle entrance) (AU#238)¹

Three (3) Arterial Units at Ultimate Capacity

1. 164th Street SE/SW from I-5 NB Ramps to Mill Creek City Limits (AU#218)
2. 164th Street SW from I-5 SB Ramps to Lynnwood City Limits (AU#219)
3. Snohomish-Woodinville Road (SR 522 EB Ramps to King Co. Line)(AU#211)

Eleven (11) Arterial Units are at Risk of Falling into Arrears

1. 4th Avenue W from Everett City Limits to 112th Street SW (AU#352)
2. 4th Avenue W from 128th Street SW to 112th Street SW (AU#229)
3. 112th Street SW from Beverly Park Road to Airport Road (AU#234)
4. 204th Street SW from Lynnwood City limits to 28th Avenue W (AU#215)
5. Airport Road/128th Street SW from SR 99 to I-5 SB on & off ramps (AU#228)
6. Bunk Foss & Ritchey Roads from SR 9 to South Machias Road (AU#256)
7. Lincoln Way from Beverly Park Road to Admiralty Way (AU#453)
8. Meridian Avenue S from Meadow Place SW to SR 96 (AU#298)
9. Poplar Way from Lynnwood City Limits to Brier City Limits (AU#278)
- 10 / 11. York Road/35th Avenue SE (Grannis Road to SR 524) (AU#337 & AU#420)

¹ 20th Street SE (SR 9 to the SR 2 Westbound trestle entrance) (AU#238) was annexed into the City of Lake Stevens and is considered in arrears only for those applications deemed complete prior to 12/30/09, the effective date of the annexation.

2010 Concurrency Report

The 2010 concurrency report summarizes the level-of-service (LOS) of Snohomish County's Arterial Road System and the strategies by the Department of Public Works to remedy LOS deficiencies. This report covers the period from April 2009 (the date of publication of the previous report) through April 2010.

Arterial Units in Arrears

Airport Way from 99th Avenue SE to SR 9 (AU#353)

This urban arterial unit is located in TSA C. This unit was declared "in arrears" on December 8, 2000. Airport Way has an adopted standard of LOS E (13 mph). Airport Way is impacted by delay due to the WSDOT signal at the intersection of Airport Way and SR 9. Traffic congestion is further compounded by traffic at the stop-controlled intersection of Springhetti Road and Airport Way and its close proximity to SR 9. Based on travel time studies conducted in 2000, 2001, 2002, and 2007, the westbound LOS is consistently LOS F.

In 2005 DPW, in coordination with WSDOT, completed a feasibility study that identified specific improvements for the Airport Way/Marsh Road/SR 9 intersection. The final improvements include additional lanes on all approaches to these intersections and relocating the intersection of Springhetti Road and Airport Way to the east. The new Springhetti Road and Airport Way intersection will be a 2 way stop with Airport Way westbound (towards SR 9) having a free right turn lane to help the AM peak hour traffic to flow with minimum disturbance or hindrance and a stop going southbound on to Springhetti Road. Airport Way eastbound from SR 9 is free flowing to either the City of Snohomish or south on Springhetti Road. WSDOT started construction in 2008 and construction was completed in the March 2010.

A March 2010 travel time study forecast the PM NB movement LOS to be C and the PM SB LOS to be E. As of the date of this report no decision had been made as to any change in status for this arterial unit.

Marsh Road from Lowell Larimer Road to SR 9 (AU#198)

This rural arterial unit is located in TSA C. This unit was declared "in arrears" on June 18, 2004. Marsh Road is a rural arterial that carries urban traffic volumes and is thus considered an urban arterial unit with an adopted standard of LOS E (13 mph). There were no improvements programmed or fully-funded to remedy the LOS deficiency. Therefore, DPW determined that Marsh Road was to be placed in arrears.

The PM eastbound direction of travel for Marsh Road has a history of operating at a deficient LOS. Since June of 2000, travel time studies on this arterial unit have consistently been recorded below the adopted LOS E standard for an urban arterial. However, there were two programmed and funded projects that were expected to provide operational relief to Marsh Road. The first was the reopening of Lowell-Snohomish River Road between Everett and Snohomish. The second was the widening to five lanes and extension of 134th PI SE/Cathcart Way from Seattle Hill Road to SR 9.

Lowell-Snohomish River Road reopened in January 2002. Cathcart Way was opened in May 2003. By the spring of 2004 travel patterns using the two new routes had stabilized, but the expected diversion of traffic and the anticipated improvement in travel time on Marsh Road was not as great as anticipated. Travel time studies performed in 2006 determined that the

arterial unit was operating at LOS F with an average speed of 8.53 mph for eastbound travel in the PM peak hour.

In 2005 DPW, in coordination with WSDOT, completed a feasibility study that identified specific improvements for the Marsh Road/ Airport Way & SR 9 intersection. The final improvements include additional lanes on all approaches to these intersections and relocating the intersection of Springhetti Road and Airport Way to the east. The new Springhetti Road and Airport Way intersection will be a 3 way stop with Airport Way westbound (towards SR 9) having a free right turn lane to help the AM peak hour traffic to flow with minimum disturbance or hindrance. WSDOT started construction in 2008 with completion scheduled for 2010. John Chi, the WSDOT project manager, stated in April 2010 construction had been completed in March of 2010.

A March 2010 travel time study forecast the LOS in the AM WB movement to be LOS A, the EB movement to be LOS B, the PM EB movement to be LOS B and the PM WB movement to be LOS B. As of the date of this report no decision had been made as to any change in status for this arterial unit.

A potential future issue may be a suite of thirteen plats that are planned along Lowell-Larimer Road, east of Marsh Road, which may adversely affect the intersection of Marsh Road and Seattle Hill Road. Seven of these plats were approved by the Hearing Examiner on October 31, 2008 with through access from Lowell-Larimer Road allowed to connect through to the Highlands subdivision located to the south. An additional connection is proposed within three other plats to the east that would connect Lowell-Larimer Road to 71st. These connections should help with dispersing traffic which may be added to the intersection of Marsh Road and Seattle Hill Road, which could affect the LOS.

Seattle Hill Road from 35th Avenue SE to SR 96 (AU#202)

This urban arterial unit is located in TSA D. This unit was determined to be in arrears on August 25, 2005. This urban minor arterial provides access and circulation to the rapidly growing commercial and residential areas of the East Mill Creek UGA, Silver Firs and Snohomish Cascade neighborhoods. The threshold for acceptable LOS is "E" represented by a travel speed of 13 mph or faster for this type of roadway.

Prior to 2009 this arterial unit had an AM SB average travel speed of about 21 mph, which resulted in an acceptable LOS and a PM NB average travel speed of about 12 mph, which results in an unacceptable LOS F. A travel time study completed in May of 2009 indicated that under current conditions, this arterial unit has an AM SB movement & NB movement LOS of C, and a PM NB movement LOS of D and a SB movement LOS of C. The forecast LOS for the AM SB movement & NB movement is LOS C, and the PM SB movement is LOS C and PM NB movement is LOS E. The states signal timing for the northbound leg of the intersection of Seattle Hill Road and SR 96 in the PM is the cause of this arterial unit being in arrears. The County will continue to work with WSDOT to determine solutions to the intersection that would allow this unit to be taken out of arrears.

The 2010-2015 TIP has two projects identified, (TIP# E.28.04) and (TIP# 47.02). (TIP# E.28.04) is for improvements at the intersection of 35th Ave. SE and Seattle Hill Road. The improvements are a 100-foot northbound right turn pocket at the intersection of 132nd Street SE and Seattle Hill Road and a 250-foot westbound right turn pocket, together with signalization improvements, curb, gutter and sidewalks. Construction of these improvements has started and is anticipated to be completed in spring 2010. After completion of these improvements the County will perform a travel time study to determine if this arterial unit can be taken out of arrears. (TIP# 47.02)

20th Street SE from SR 9 to the US 2 Westbound Trestle Entrance (AU#238)

This urban arterial unit is located in TSA B. Effective December 30, 2009 20th Street SE from SR 9 to the US 2 westbound trestle entrance (AU#238) was annexed into the City of Lake Stevens and became a City road as of that date. This Arterial Unit is retained in this report because there are developments that were applied for and deemed complete prior to the effective date of the annexation, for which County regulations apply.

When arterial unit AU#238 was taken out of arrears in 2003, significant numbers of new development applications for the Cavalero Hill area were submitted, resulting in the addition of significant numbers of new trips in the pipeline. All of these new vehicular trips have been added to the pipeline of traffic to be considered when forecasting LOS. As a result of all the new vehicular trips 20th Street SE from SR 9 to the US 2 westbound trestle entrance (AU#238) was determined to be in arrears effective November 8, 2004, based on projections of future LOS.

Analysis considering all additional pipeline trips and all of the capacity improvements that are currently fully-funded for construction, and will be constructed within six years, determined the average travel speed on 20th Street SE from SR 9 to the SR 2 westbound trestle entrance in the AM peak hour is forecast to be 8.3 mph, which is below the 13 mph standard needed to meet concurrency requirements.

This arterial unit is treated as three separate sections in the County's adopted 2010-2015 TIP as follows from east to west:

- TIP# E.27.01, 99th Avenue SE to 91st Avenue SE (overlaps AU#238 and AU#316). Widen 20 ST SE to 5 lanes with curb, gutter and sidewalks. Install new signals at 91 Ave SE and 99 Ave SE and upgrade the existing signal at SR 9.
- TIP# E.27.04, 91st Avenue SE to Cavalero Road. Widen to a 4 lane section with 2 way left turn lanes, bicycle lanes, curb, gutter and sidewalk. Provide signals at 79th, 83rd and Cavalero Road.
- TIP# E.27.05, Cavalero Road to SR 204/US 2. Widen to 4 lane section with 12' wide multiuse path on south side and sidewalk on north side.

The improvements will also include the north westbound travel lane being designated as a high-occupancy vehicle (HOV) lane in the AM peak hour, which would allow persons in buses, vanpools, and carpools to achieve higher average travel speeds by bypassing all or part of the queue that backs up from the merge.

TIP# E.27.01, 99th Avenue SE to 91st Avenue SE is under construction with completion programmed for 2010. TIP# E.27.04, 91st Avenue SE to Cavalero Road and TIP# E.27.05, Cavalero Road to SR 204/US 2 are programmed in the 2010 - 02015 six year TIP for start of construction in 2011 and completion in 2014.

Note. The County is participating with WSDOT in creating an SR 2 Route Development Plan that would document short and long term capacity and safety needs from the Port of Everett to the SR 9 interchange, including the 20th Street SE/ SR 204 merge onto SR 2. At this time the study/plan, TIP#A.14.01, is programmed for 2010 and 2011 with some anticipation that it may be placed on hold if state funding is not provided.

Arterial Units No Longer in Arrears

As of the date of this report no Arterial Units listed as being in Arrears in the 2009 Annual Concurrency Report were taken out of Arrears status.

Arterial Units at Ultimate Capacity

SCC 30.66B.110(1) states, "When the county council determines that excessive expenditure of public funds is not warranted for the purpose of maintaining adopted LOS standards on an arterial unit, the county council may designate, by motion, such an arterial unit as being at ultimate capacity. Improvements needed to address operational and safety issues must be identified in conjunction with such ultimate capacity designation." The County currently has three arterial units at ultimate capacity:

- Snohomish-Woodinville Road in TSA E (AU#211) was designated at Ultimate Capacity in 1997.
- 164th Street SE/SW east of Interstate 5 located in TSA D (AU#218), was designated at Ultimate Capacity in December 2007.
- 164th Street SW west of Interstate 5 located in TSA D (AU#219), was designated at Ultimate Capacity in December 2007.

Arterial Units at Risk of Falling into Arrears

4th Avenue W from 112th Street SW to Everett City Limits (AU#352)

This urban arterial unit is located in TSA D. A travel time study conducted by DPW on April 22, 2009 indicated this arterial unit operated at an LOS of D in the PM NB and SB movements and the AM SB movement and an LOS C in the AM NB movement. A travel time study conducted by DPW on April 27, 2010 indicates this arterial unit operated at a LOS E in the PM NB movement and a LOS D in the PM SB movement. In the forecast condition, this intersection is anticipated to operate at a LOS E in the PM NB movement, a LOS D in the PM SB movement, a LOS C in the AM NB movement and a LOS D in the AM SB movement. The Transportation Element identifies needed widening of this arterial unit from three lanes to five lanes with bicycle lanes and urban standards. There are currently no projects identified on the TIP for improvements to this arterial unit.

4th Avenue W from 128th Street SW to 112th Street SW (AU#229)

This urban arterial unit is located in TSA D. A travel time study conducted by DPW on April 22, 2009 indicated this arterial unit will operate, in the current and forecast condition, at a LOS D in the AM and PM SB movement and at a LOS C in the AM and PM NB movement. A travel time study in on April 27, 2010 indicates this arterial unit will operate, the current condition, at a LOS D in the PM NB and SB movements. The predominant cause for the reduced LOS in the SB movement is the intersection of 4th Avenue W and 128th Street SW. The current improvements along this segment of 4th Avenue W are a 5-lane urban road section with bicycle lanes and urban standards on both sides. There are no additional improvements anticipated along this arterial. However, minor channelization and signal optimization may be possible for the north leg of the intersection at 128th Street SW and 4th Avenue W. In 2009 the channelization and signalization on the north leg was changed to have two dedicated left turn lanes and one combined thru and right turn lane. Results of the change will be analyzed to determine their impact.

112th Street SW from Beverly Park Road to Airport Road (AU#234)

This urban arterial unit is located in TSA D. Travel time studies in March, 2009 indicate both the AM and PM EB LOS to be an E and the AM and PM WB LOS to be a D. Preliminary results from pending 2010 travel time studies show that LOS has degraded to E in both directions for the PM peak hour with no LOS change for AM peak hour. Congestion along 112th St. SW typically occurs at the signalized intersections of Beverly Park Road and Airport Road, resulting in a LOS that approaches the minimum standard at times. No improvements along the 112th Street SW corridor are shown in the adopted 2010-2015 TIP. DPW is currently conducting operational analysis and a forecast is pending for 2010.

204 Street SW from Lynnwood City Limits to 28th Avenue W (AU#215)

This urban arterial unit is located in TSA F. Forecast analysis performed in 2009 showed an LOS E in the PM for both the WB and EB directions with a speed of 14.9 mph in the EB direction. The majority of the congestion occurs at the signalized intersection of 204th St. SW and Poplar Way. Based on this AU having recently fallen within the parameters of an Arterial Unit at Risk the adopted 2010 to 2015 TIP does not have any projects listed and additional analysis will be done to monitor the LOS along this corridor. The adopted 2010 – 2015 TIP does identify safety improvements to the intersection of 204th St. SW and 28th Ave. W (D.02.39) consisting of intersection signalization and channelization.

Airport Road / 128th Street SW from SR 99 to I-5 SB On/Off Ramps (AU#228)

This urban arterial unit is located in TSA D. This arterial unit is one of four arterial units in the county with a reduced acceptable minimum LOS standard of 10 mph. Travel time studies in 2009 and 2010 indicate a LOS issue occurring primarily during the PM Peak Hour in the EB movement. A travel time study recorded during the PM peak hour in April 2010 recorded a LOS E with an average travel speed of 10.07 mph. The pending forecast for AU 228 is likely to result in a deficient LOS. Although the adopted 2010 to 2015 TIP mentions minor intersection improvements for 128th Street SW at East Gibson Road (E.52.03) the majority of the congestion continues to occur between 5th Place West and Interstate 5. This segment of 128th Street SW is a busy shopping corridor, which has been at or near capacity for some time.

Bunk Foss Road / Ritchey Road from SR 9 to S Machias Road (AU#256)

This rural arterial unit is located in TSA C. The adopted LOS standard for this arterial unit is LOS C. The May 2008 travel time study by DPW indicates the AM westbound movement currently operates at a LOS D. The delay for this movement is caused by the signal controls at the intersection of SR 9 and the Bunk Foss Road. After factoring in the travel time credits allowed for the controlled intersections, this arterial unit is currently operating at a LOS C. The pipeline does not show a significant increase along this arterial over the next 6 years. The County is currently working with the WSDOT to discuss changes to the lane channelization and signalization for the westbound traffic onto SR 9. The County will continue to monitor this arterial. No work is planned for this arterial unit.

Lincoln Way from Beverly Park Road to Admiralty Way (AU#453)

This urban arterial unit is located in TSA D. Travel time studies performed in 2007, 2008, and 2009 indicate this arterial unit is operating at or near a deficient LOS. WSDOT signals at both SR 99 and SR 525 contribute to problems associated with this arterial unit. DPW is currently evaluating possible options for improving this arterial despite the fact that it intersects two different State routes (SR 99 and SR 525) in close proximity. This AU is in the area of a pending annexation effort by the City of Lynnwood.

Meridian Avenue S from Meadow Place SW to SR 96 (AU#298)

This urban arterial unit is located in TSA D. Travel time studies in 2007 and 2009 indicate the AM NB and SB movements to be LOS C, the PM NB movement to be LOS E and the PM SB movement to be LOS C. DPW has determined that the major contributing factor to the PM NB movement deficient LOS is the intersection of SR 96 (128th St) and Meridian Avenue S (aka 3rd Avenue SE at its north end). The reason for the delay at this intersection is its close proximity to I-5 and the associated backups and the high traffic volumes along SR 96. The signalization at this intersection is controlled by WSDOT.

Poplar Way from Lynnwood City Limits to Brier City Limits (AU#278)

This urban arterial unit is located in TSA F. A travel time study in 2009 indicated the possibility that LOS may be approaching the adopted standard for this arterial unit. A forecast done in late 2009 indicated this arterial unit in the PM NB movement will operate as an LOS E. A May 5, 2010 travel time study showed the LOS in the PM NB movement to be LOSD and in the PM SB movement to be LOS E. A developer's traffic study identified the need for a southbound right-turn pocket at the intersection of Larch Way and Poplar Way that will improve the LOS along this arterial. DPW will continue to monitor the arterial unit in conjunction with new development as it occurs in this corridor. Any needed improvements at intersections along this arterial will likely occur only as a condition of development.

York Road/39th Avenue SE from Grannis Road to SR 524 (AU#337 and AU#420)

Note that this arterial unit has two numbers because it is on the border between two transportation service areas (TSAs) and is thus counted as two arterial units in the summary tables.

This urban arterial unit is located on the border of TSA E and TSA F. In May 2006 this arterial unit was operating at LOS E in the AM SB movement, with a measured average travel speed of 15.3 mph. This arterial unit went into arrears in December of 2006 after the arterial unit was projected to have an average travel speed of less than 13 miles per hour (the LOS E threshold for this classification of urban arterial) in the AM SB movement. The LOS declined because of three reasons:

1. The first being the large number of developments in the area that have been deemed concurrent and were "in the pipeline" meaning that the forecast of future LOS included the trips that will be added to the arterial unit when those developments are occupied.
2. The second was due to increased traffic that diverted to this AU to bypass a construction project on SR 9.
3. The third being the operational constraint of the intersection of York Road with SR 524 and the close proximity of this intersection with the immediate intersection to the north (York Road and Jewell Road).

The AU was taken out of arrears in October of 2008 based on the LOS improving because the construction project on SR 9 was completed and the diverted bypass traffic

was significantly reduced. One remedy to the constraint referenced in 3 above is the extension of the southbound right-turn lane on York Road at its intersection with SR 524, and rechannelization of the intersection of York Road and Jewell Road. A travel time study completed on April 28, 2009 indicated the existing AM LOS for the NB and SB movements to be LOS C. The PM LOS for the NB movement is LOS B and the SB movement is LOS C. The forecast AM LOS for the NB movement is LOS F and the SB movement is LOS F. The PM LOS for the NB movement is LOS B and the SB movement is LOS D. DPW continues to analyze the traffic operations along this corridor to evaluate different improvement alternatives.

Summary Tables

Table 1: Summary of Level-of-Service (LOS) Status

Below is the annual summary of the current and past LOS status of arterial units:

	'02	'03	'04	'05	'06	'07	'08	'09	10	% of 2010 AU's to Total AU's
LOS above screening level ^a	225	261	258	255	252	250	251	259	236	87%
LOS below screening level ^a	42	34	37	340	64	53	50	42	34	13%
Total number of arterial units	267	295	295	295	316	303	301	301	270	100%
Breakout of arterial units below the screening level:										
Monitoring level	20	10	10	18	25	23	19	10 ^b	11	4%
Operational analysis level	15	17	21	14	30	22	21 ^d	25 ^c	17	6%
Arterial units in arrears	6	6	5	7	8	7	7 ^e	4	3	1%
Arterials at Ultimate Capacity	1	1	1	1	1	1	1	3	3	1%
Total below screening level	42	34	34	40	64	53	50	42	34	13%

^a See *Review of Concurrency Management System* described above for an explanation of the various 'tiers' of the concurrency management system. In simple terms, arterial units above the screening level are those clearly passing the LOS test. Below the screening level, as congestion increases, the level of analysis typically goes from monitoring to operational analysis which determines if the arterial unit is in arrears.

^b Two of these arterial units have two numbers (209 and 332) and (336 and 207) because it is on the border between transportation service areas (TSAs) and thus counts as two arterial units.

^c One of these arterial units has two numbers (337 and 420) because they are on the border between transportation service areas (TSAs) and thus each counts as two arterial units.

^d Two of these arterial units have two numbers (336/207 and 209/332) because they are on the border between transportation service areas (TSAs) and thus each counts as two arterial units.

^e One of these arterial units has two numbers (337 and 420) because it is on the border between transportation service areas (TSAs) and thus counts as two arterial units.

Table 2: Summary of Concurrency Determinations

Table 2 shows a summary of the concurrency determinations that were made in 2009. For most types of development the concurrency determinations that were made in 2009 were significantly down from those made in previous years. The data is organized by Transportation Service Areas and by size and type of Development. Size is determined by the number of peak-hour trips (PHT).

	Transportation Service Areas						Totals by Year			
	A	B	C	D	E	F	2009	2008	2007	2006
Small Residential (less than 7 PHT)	6	4	2	11	0	5	28	65	148	168
Medium Residential (7 - 50 PHT)	7	4	0	3	2	2	18	23	132	215
Large Residential (>50 PHT)	0	0	1	1	0	0	2	5	24	34
Small Non-Residential (less than 5 PHT)	1	0	1	2	2	0	6	13	5	3
Medium Non-Residential (5 - 50 PHT)	2	3	2	3	4	0	14	10	18	13
Large Non-Residential (>50 PHT)	0	0	0	1	0	0	1	6	4	8
Total	16	11	6	21	8	7	69	122	331	441

Table 3: Concurrency Projects in the 2010 - 2015 TIP

The Snohomish County Council adopted the current 2010 - 2015 TIP on November 23, 2009. The TIP is divided into separate Groups. Group E is titled "Capacity" and identifies those projects that are designed to improve capacity on the County's arterial network.

Within Group E are projects that will improve AU's listed in this report with concurrency problems, i.e. in arrears or are at risk of going into arrears (at risk).

To find information on the projects listed in Table 3 below, or all the projects in the TIP, you may view the currently adopted TIP on the County's web site. The web site address is:

http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/TES/ProgramPlanning/

Table 3 lists those "Concurrency Projects" adopted in the 2010 - 2015 TIP that will improve AU's listed in this report as being in arrears or are at risk of going into arrears.

TIP #	PROJECT
E.27.01	20 ST SE CORRIDOR: PH 1: 91 AVE SE TO 99 AVENUE SE
E.27.02	20 ST SE CORRIDOR: PH 2: 99 AVE SE TO S LAKE STEVENS RD
E.27.04	20 ST SE CORRIDOR: CAVALERO RD TO 91 ST AVE SE
E.27.05	20 ST SE CORRIDOR: US 2 TO CAVALERO RD
E.28.02	35 AVE SE/180 ST SE INTERSECTION IMPROVEMENT
E.28.03	35 AVE SE/GRANNIS RD INTERSECTION SIGNAL AND CHANNELIZATION
E.28.04	35 AVE SE AND SEATTLE HILL ROAD CHANNELIZATION
E.28.05	35 AVE SE/39 AVE SE TO 180 ST SE CORRIDOR WIDENING
E.28.06	35 AVE SE: 180 ST SE TO 152 ST SE CORRIDOR WIDENING
E.45.02	NORTH RD FROM SR 524 TO 164 ST SW CORRIDOR WIDENING
E.47.02	SEATTLE HILL RD FROM 35 AVENUE SE TO 132 ST SE 3 INTERSECTION IMPROVEMENTS
E.52.03	E GIBSON RD / ASH WAY AND 128 ST SW INTERSECTION IMPROVEMENTS

Table 4: Arterial Status in 2010 Compared with 2009

Table 4 shows the 2010 status of arterial units and changes between the 2009 report and the 2010 report sorted by TSA. The abbreviations in the table are:

Arterial Unit Status

S = Screening
M = Monitoring
OA = Operational Analysis
AUIA = Arterial Unit in Arrears
UC = Ultimate Capacity
AR = At Risk

OA Level Study Terms

TTS = Travel Time Study
IntTTS = Intermediate TTS
RECON = Reconnaissance

Additional Terms

LOS = level of service
ADT = average daily traffic
FC = forecast LOS
V/C = LOS estimate based on comparison of volumes and estimated capacity
W / IMPS = with fully-funded improvements completed or expected to be complete within six years
U/R = U = Urban & R = Rural
PEND = pending

TSA	RD NAME	FROM	TO	U/R	UNIT	2009	2010	2010 NOTES
A	SMOKEY PT BLVD	200 ST NE	SR 530	R	357	S	OA	ANNEXED
B	20 ST SE	SR 2 WB TRESTLE ENT.	SR 9	U	238	AUIA	AUIA	ANNEXED
B	20 ST SE	SR 9	S LK STEVENS RD	U	316	OA	OA	ANNEXED
B	BUNK FOSS / RITCHEY RD	SR 9	S MACHIAS RD	R	256	OA	OA	TTS: WB LOS D - RURAL, AR
C	AIRPORT WAY	99 AVE SE	SNOHOMISH C/L	U	235	OA	M	PM NB LOS D, AM FC LOS D.
C	AIRPORT WAY	SR 9	99 AVE SE	U	353	AUIA	AUIA	FC LOS E, ADDITIONAL ANALYSIS NEEDED!
C	MARSH RD	LOWELL LARIMER RD	SR 9	U	198	AUIA	AUIA	FC LOS B, PENDING ARREARS STATUS DECISION
C	SPRINGHETTI RD	BROADWAY AVE	AIRPORT WAY	R	445	OA	OA	AM NB LOS C, FC LOS C
D	4 AVE W	128 ST SW	112 ST SW	U	229	OA	OA	PM TTS LOS D, AR
D	4 AVE W	112 ST SW	EVERETT C/L	U	352	OA	OA	NB TTS LOS E, FC LOS PEND, AR
D	36TH AVE W	LYNNWOOD C/L	164TH ST SW	U	287	M	OA	RECON: AM NB LOS E
D	35 AVE SE	168 ST SE	SEATTLE HILL RD	U	204	OA	M	FC LOS C
D	36 AVE W/35 AVE W	164 ST SW	148 ST SW	U	415	M	S	SB PM TTS LOS C
D	52 AVE W / BEVERLY PARK RD	148 ST SW	MUKILTEO C/L	U	223	M	S	EB & WB PM LOS C
D	112 ST SW	BEVERLY PARK RD	AIRPORT RD	U	234	OA	OA	AM/PM IntTTS LOS D/ E, PEND FC LOS, AR

TSA	RD NAME	FROM	TO	U/R	UNIT	2009	2010	2010 NOTES
D	132 ST SE/134 PL SE	SR 96	SNOH. CASCADE DR	U	259	M	S	RECON LOS C, OA-VC
D	148 ST SW/MAD. WAY	SR 99	ASH WAY	U	225	M	M	LOS C, AM & PM BOTH DIRECTIONS
D	164 ST SW/SE	I-5 NB ON/OFF RAMPS	MILL CREEK C/L	U	218	UC	UC	NO CHANGE FROM LAST YEAR
D	164 ST SW/SE	LYNNWOOD C/L	I-5 SB ON/OFF RAMPS	U	219	UC	UC	NO CHANGE FROM LAST YEAR
D	180 ST SE	SR 527	35 AVE SE	U	206	OA	M	FC LOS PEND
D	AIRPORT WAY/128 ST SW	SR 99	I-5 SB ON/OFF RAMPS	U	228	OA	OA	FC LOS PEND, AR
D	ALDERWOOD MALL PKWY	164 ST SW	LYNNWOOD C/L	U	220	OA	OA	TTS PM NB LOS D, FC LOS PEND
D	BEVERLY PARK RD	SR 525	AIRPORT RD (EVT)	U	227	OA	OA	TTS PM WB LOS D, FC LOS PEND
D	GIBSON RD	SR 99	128 ST SE	U	293	OA	OA	RECON LOS C, FC LOS PEND
D	LARCH WAY	164 ST SW	178 ST SW (TSA F)	U	304	M	M	PM RECON LOS D, FC PEND
D	LINCOLN WAY	BEVERLY PARK RD	ADMIRALTY WAY	U	453	OA	OA	FC LOS E W / IMPS, EXISTING TTS F: AR
D	MEADOW RD	164 ST SW	148 ST SW	U	454	OA	M	PM SB FC LOS D
D	MERIDIAN AVE S	MEADOW PL SW	SR 96	U	298	OA	OA	TTS PM NB LOS E, PM NB FC LOS D, AR
D	SEATTLE HILL RD	35 AVE SE	SR 96	U	202	AUIA	AUIA	TTS PM NB LOS D, FC LOS E, DECISION PEND
D/E	35 AVE SE	GRANNIS RD	168 ST SE	U	336/207	OA	M	TTS PM NB LOS C; FC LOS D
E	180 ST SE	SR 9	BROADWAY AVE	U	262	OA	OA	RECON LOS E, EXCEPT EB AM LOS D
E	SNO-WOODINVILLE RD	KING CO LINE	SR 522 EB RAMPS	U	211	UC	UC	NO CHANGE FROM LAST YEAR
E/F	39 AVE SE	228 ST SE	SR 524	U	209/332	M	M	PM NB RECON LOS C, NB FC LOS D
E/F	YORK RD/35 AVE SE	SR 524	GRANNIS RD	U	337/420	OA	OA	FC LOS F: W / IMPS, AR
F	204 ST SW	LYNNWOOD C/L	28 AVE W	U	215	OA	OA	TTS & FC LOS E, AR
F	228 ST SE	35 AVE SE/BTHL C/L	39 AVE W	U	333	M	S	RECON LOS C
F	LARCH WAY	MTLK TERR C/L	CYPRESS WAY	U	214	OA	M	PM EB TTS LOS D, FC LOS D
F	LOGAN RD/LARCH WAY	CYPRESS WAY (N-LEG)	DAMSON RD	U	276	M	S	LOS C
F	POPLAR WAY	LYNNWOOD C/L	BRIER C/L	U	278	OA	OA	PM NB TTS LOS E, FC LOS E BOTH DIRECTIONS: AR